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ABSTRACT

This packet is designed to help kindergarten and elementary students become aware of their own interests, attitudes, and abilities by introducing them to various aerospace careers. The activities can serve as a positive motivator in influencing students to learn their regular school subjects, acquire good work habits, and develop positive attitudes toward work. Activities include: (1) awareness inventory; (2) aerospace careers; (3) matching illustrations--workers to office symbols; (4) matching--occupational titles to aerospace workers; (5) career puzzles; (6) vocabulary puzzles; (7) spelling; (8) matching--careers to job responsibilities; (9) visual discrimination; and (10) concentration. (KHR)

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FUN IN FLIGHT:

Exploring Careers in the Aerospace World

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The most important step in a person's future is preparing for a career.

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AEROSPACE CAREER AWARD

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INTRODUCTION

The school is the center for educating students about their future choices for work. Students are benefiting from the emphasis placed on career education. Career education is the totality of experiences through which people learn about and prepare to engage in work as part of their way of living. A person's career is a developmental concept beginning in the very early years and continuing well into the retirement years. Therefore, career education must span almost the entire life cycle since one's career and education extend from the preschool years through the retirement years.

Work values, a part of one's personal value system, are developed to a significant degree during the elementary school years and are modifiable during those years. Specific occupational choices represent only one of a number of choices involved in career development. These choices may increase in realism as one moves from childhood into adulthood.

Aerospace refers to the environment which includes the expanse extending upward and outward from the surface of the Earth. This expanse includes the atmosphere and space. It also is an area of flight activity which encompasses general, commercial, and military aviation as well as spacecraft, satellites, and probes for space exploration and utilization.

Aerospace personnel are employed in many different job categories by aerospace industries, airlines, and government agencies. This packet has been designed to help kindergarten and elementary students become aware of their own interests, attitudes, and abilities by introducing them to various aerospace careers. The activities can serve as a positive motivator in influencing students to learn their regular school subjects, to acquire good work habits, and to develop positive attitudes toward work. Assimilation of such knowledge is most effective when begun in the early childhood years.

The following information explains how the activities should be assigned. Select the activities you assign based on the academic readiness of your students.

Activity 1—Awareness Inventory

Students should understand that choosing a way for them to make a living will directly influence the way they live. Having the background knowledge necessary to choose the career best suited to the students' interests and abilities will make a lasting contribution to their future happiness and personal success. This exercise will support the fact that students need to know themselves—their likes and dislikes. Duplicate Aerospace Activity Sheet 1 and have students evaluate themselves. After students have completed the Awareness Inventory, have a group discussion regarding the statements and their responses.

Activity 2—Aerospace Careers

The purpose of this activity is for students to learn about some of the aerospace careers. Even if students do not have an interest in certain careers, they will have at least received information about what people do in these careers. They also will become more aware, better informed, more tolerant, and more concerned as citizens when they understand and appreciate the various jobs and duties that aerospace people perform. There are 23 aerospace careers illustrated. Duplicate the specific careers you want to discuss based on the grade level you are teaching and the exercises (Aerospace Activities 3-10) you

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anticipate having students complete. Have students color and discuss or write a story about the pictures. Aerospace career support information is contained in the *Teacher Resource Section*.

Activity 3 - Matching Illustrations: Workers to Office Symbols

These two exercises will test the students' understanding of the aerospace workers and their work environment. One exercise matches the pictures of the aerospace workers to the office symbols; the other exercise matches the aerospace job titles to the office symbols.

Activity 4—Matching: Occupational Titles to Aerospace Workers

The students will have an opportunity to demonstrate their comprehension of the aerospace workers and their titles. Students should be able to pronounce and spell each title.

Activity 5—Career Puzzles 1 and 2

Career puzzles 1 and 2 are fun-type activities that should help students become more familiar with the aerospace career titles. Half the class may work puzzle 1 while the other half works puzzle 2. The puzzles may be assigned as homework. Make a transparency of the puzzle answers (refer to Teacher Resource Sheet 4) for students to review.

Activity 6—Vocabulary Puzzles 1 and 2

Puzzle 1 can be assigned to the entire class. Divide the class into two teams for Puzzle 2. Each team will need a captain and a recorder. Time the competition and reward the winning team. Have students research the definition of each term.

Activity 7—Spelling

Have students complete the spelling exercise. Reemphasize the definition of each term.

Activity 8—Matching: Careers to Job Responsibilities

Students should be able to read the responsibilities and locate the career title that matches the responsibility.

Activity 9—Visual Discrimination

These four exercises give students practice in being able to accurately see the similarities and differences in aerospace objects—airplane, helicopter, rocket, and space shuttle.

Activity 10—Concentration

This exercise will reinforce the students' knowledge of the letters of the alphabet. Students will have fun matching the letters and observing the aerospace illustrations.

Aerospace Careers for the Elementary Level Chart

This chart can be used to show that the subjects the students are now studying can be used to prepare them to work in one of the aerospace careers.

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STUDENT AEROSPACE ACTIVITY SECTION

10 Activities

Aerospace Activity 1

Name_____

AWARENESS INVENTORY

Indicate your answer to the following statements by circling Y if the statement describes you and N if the statement does not.

Y	N	1. I enjoy writing stories or poems.
Y	N	2. I like to work as part of a team.
Y	N	3. I enjoy working with my hands.
Y	N	4. I like working math problems.
Y	N	5. I get along well with people.
Y	N	6. I have confidence in myself.
Y	N	7. I listen while others talk.
Y	N	8. I enjoy repairing things.
Y	N	9. I like working outdoors.
Y	N	10. I make good grades.
Y	N	11. I like being creative.
Y	N	12. I like to use tools.
Y	N	13. I like competition.
Y	N	14. I am dependable.
Y	N	15. I like being neat.
Y	N	16. I have initiative.
Y	N	17. I am ambitious.
Y	N	18. I like to read.
Y	N	19. I am honest.
Y	N	20. I am moody.

Name_____

AEROSPACE CAREER

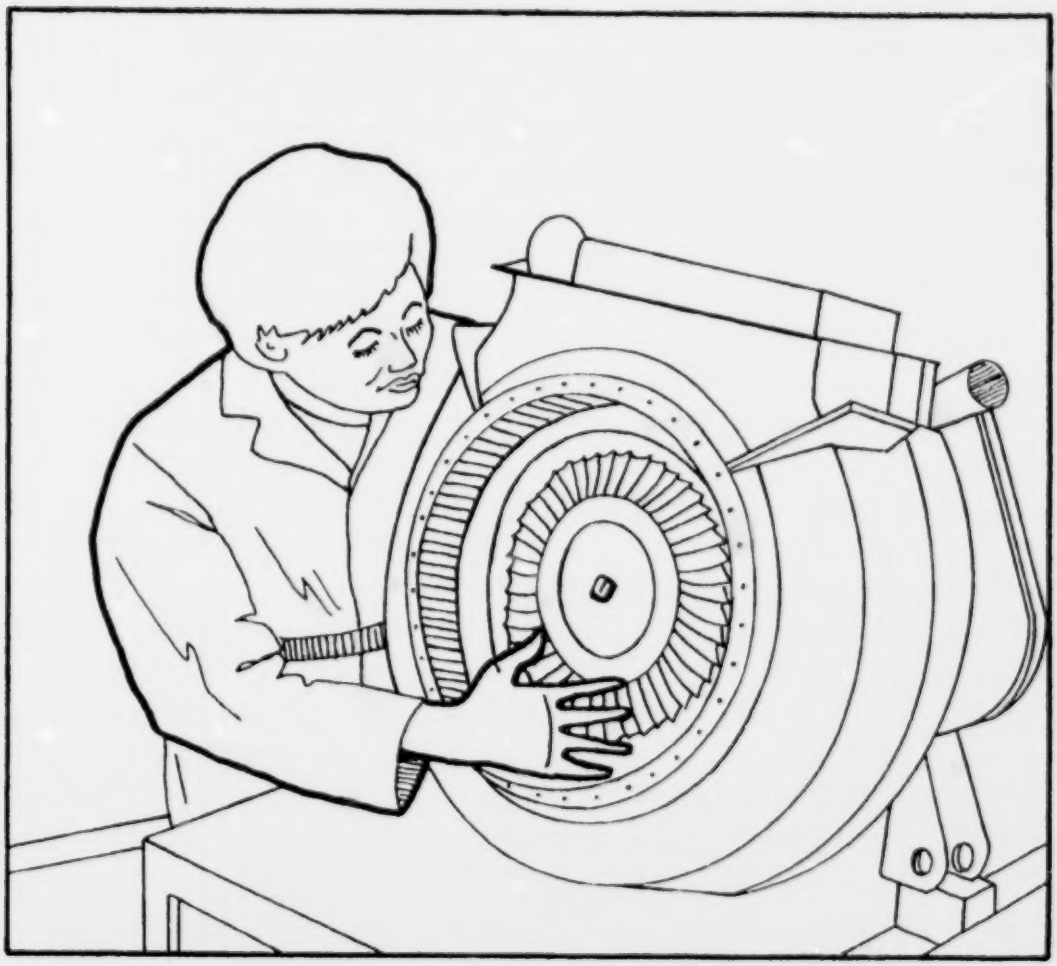
AERONAUTICAL ENGINEER

- **DESIGNS AND DEVELOPS AIRCRAFT.**
- **STUDIES AND EVALUATES PROTOTYPES AND PRODUCTION VEHICLES.**

Name_____

AEROSPACE CAREER

AEROSPACE ENGINEER



- **WORKS WITH AIRCRAFT, ROCKETS, AND OTHER SPACECRAFT.**
- **SOLVES HEALTH OR ENVIRONMENTAL PROBLEMS RELATED TO AERONAUTICS AND SPACE FLIGHT.**

8

Name_____

AEROSPACE CAREER

AEROSPACE ENGINEERING TECHNICIAN

- **CHECKS OR PREPARES DRAWINGS, DIAGRAMS, AND SPECIFICATIONS.**
- **PERFORMS TESTS ON MATERIALS, PARTS, AND SYSTEMS.**

Aerospace Activity 2

Name _____

AEROSPACE CAREER

AIR TRAFFIC CONTROLLER

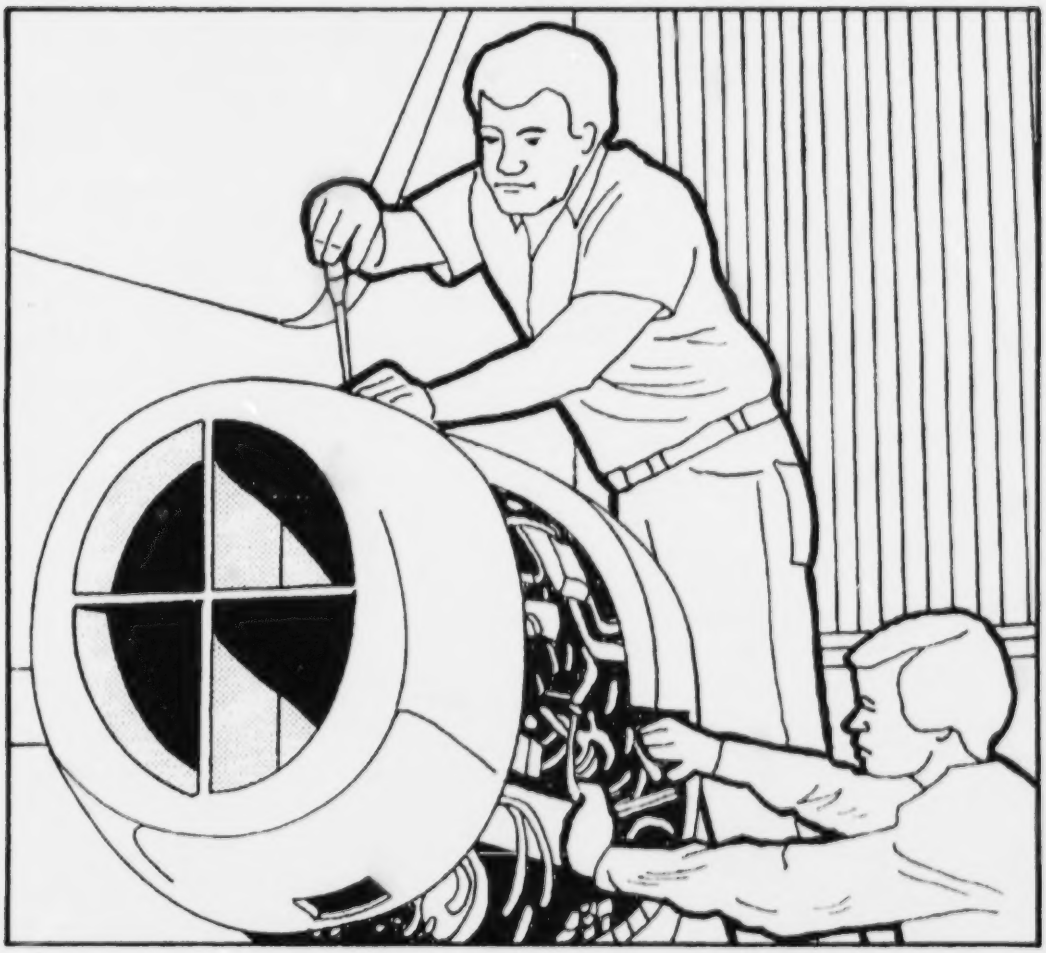
- **DIRECTS ALL FLIGHT ACTIVITIES TO PREVENT ACCIDENTS.**
- **GIVES ADVICE AND INFORMATION BY RADIO TO PILOTS.**
- **MONITORS ALL PLANES IN AND AROUND THE AIRPORT.**

10

Name_____

AEROSPACE CAREER

AIRCRAFT MECHANIC



- **REPAIRS AND MAINTAINS AIRCRAFT AND AIRCRAFT ENGINES.**
- **ADJUSTS AND MAINTAINS THE AIRCRAFT POWER PLANT AND ELECTRICAL WIRING SYSTEM.**

11

Name _____

AEROSPACE CAREER

AIRLINE RESERVATION AGENT

- **MAKES AND CONFIRMS RESERVATIONS FOR PASSENGERS ON SCHEDULED AIRLINE FLIGHTS.**
- **MAINTAINS AN INVENTORY OF PASSENGER SPACE AVAILABLE ON FLIGHTS.**

Name_____

AEROSPACE CAREER

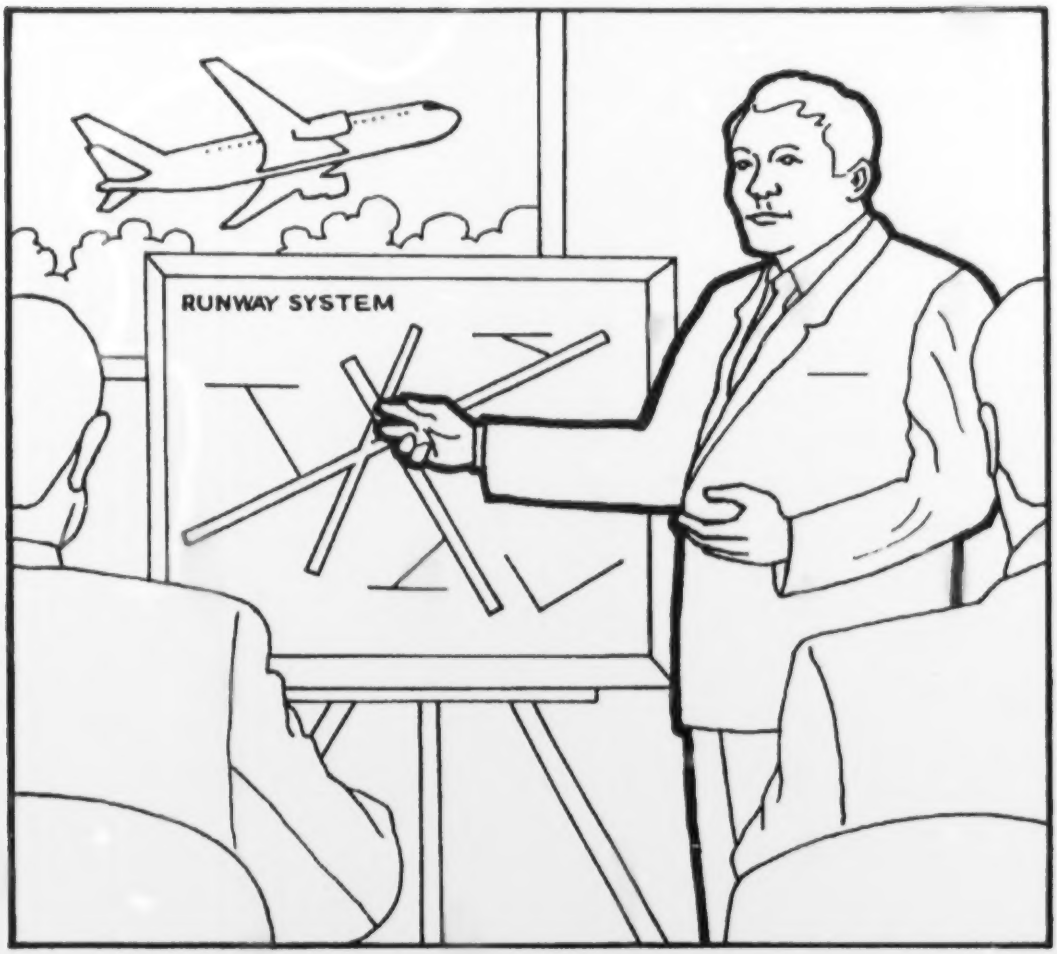
AIRLINE SECURITY REPRESENTATIVE

- **SCREENS ALL PEOPLE BOARDING THE AIRCRAFT AND THEIR CARRY-ON LUGGAGE FOR FORBIDDEN ARTICLES.**

Name_____

AEROSPACE CAREER

AIRPORT MANAGER



- **DIRECTS THE EFFICIENT DAY-TO-DAY OPERATION OF THE AIRPORT.**
- **ENFORCES AIRPORT AND GOVERNMENT REGULATIONS.**

Aerospace Activity 2

Name_____

AEROSPACE CAREER

ASTRONAUT

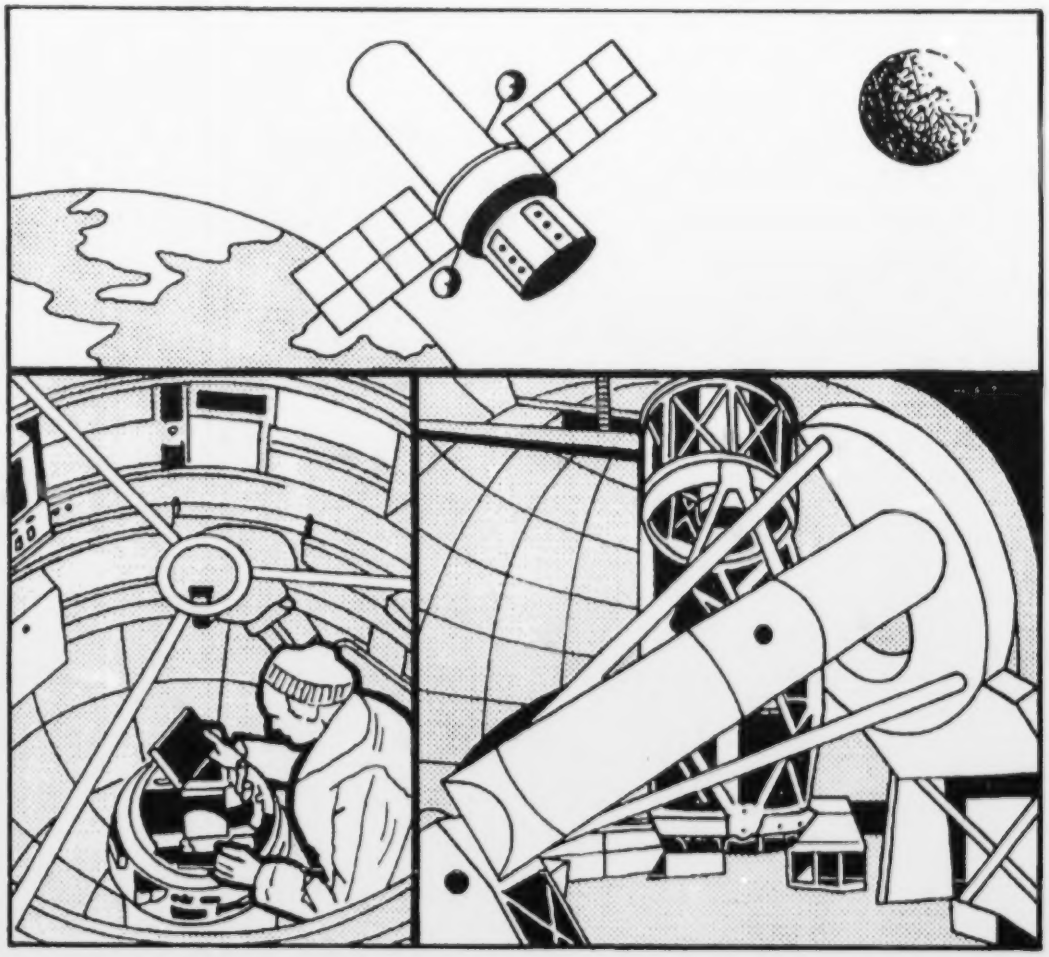
- **OPERATES A SPACE VEHICLE IN FLIGHT.**
- **CONDUCTS EXPERIMENTS WITH THE SPACECRAFT.**
- **CONDUCTS EXPERIMENTS AND GATHERS INFORMATION WHILE IN ACTUAL FLIGHT AND ON THE MOON.**

15

Name_____

AEROSPACE CAREER

ASTRONOMER

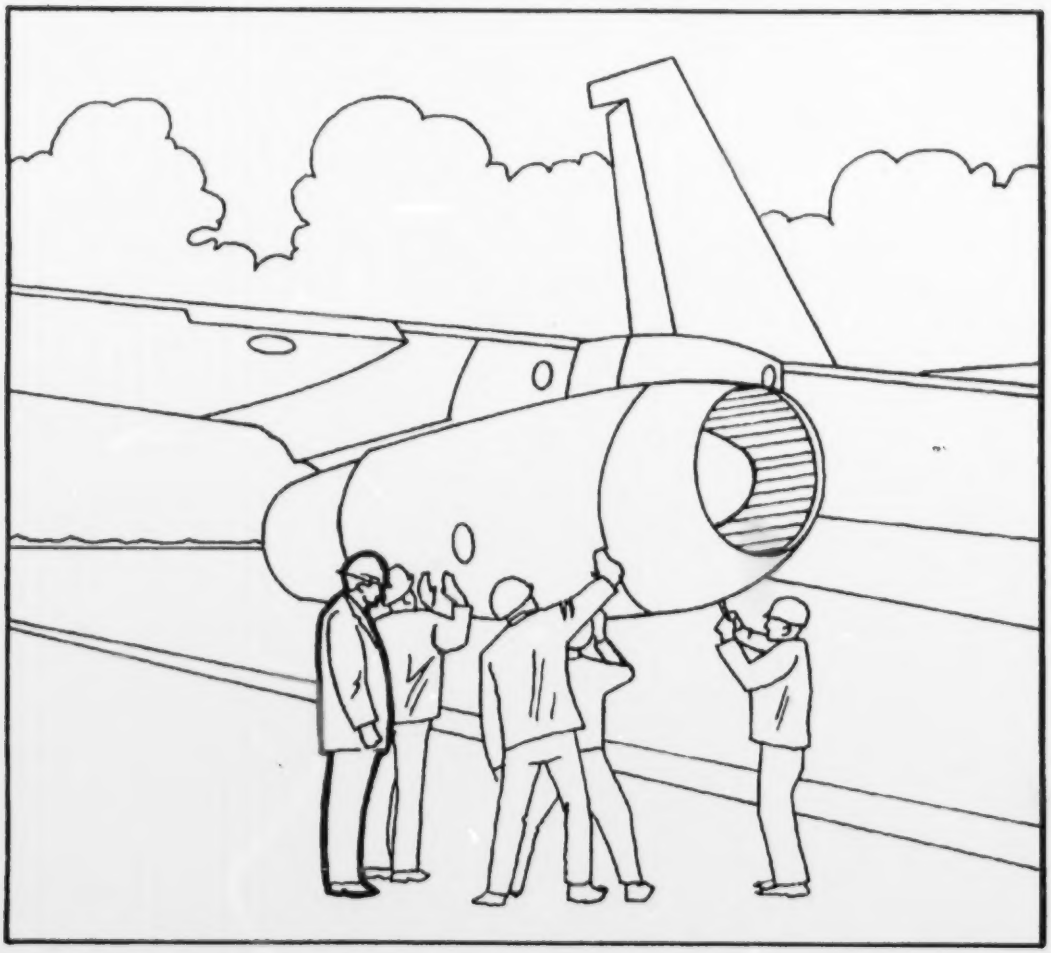


- **STUDIES THE UNIVERSE AND ITS CELESTIAL BODIES.**
- **STUDIES THE SIZE AND SHAPE OF THE EARTH AND OTHER PLANETS.**

Name_____

AEROSPACE CAREER

AVIATION SAFETY OFFICER



- **INSPECTS AIRCRAFT AND MAINTENANCE FACILITIES.**
- **EXAMINES AIRCRAFT MAINTENANCE RECORDS AND FLIGHT LOGS.**

Name_____

AEROSPACE CAREER

BAGGAGE PORTER

- **CARRIES LUGGAGE FOR PASSENGERS.**
- **DIRECTS PEOPLE TO TICKET WINDOWS.**

Name_____

AEROSPACE CAREER

ELECTRONICS ENGINEER

- **DESIGNS AND TESTS COMPUTERS AND SCIENTIFIC EQUIPMENT.**
- **DESIGNS COMMUNICATION AND ELECTRICAL POWER SYSTEMS.**

Name_____

AEROSPACE CAREER

FLIGHT ATTENDANT

- **RENDERS PERSONAL SERVICES TO PASSENGERS.**
- **PERFORMS PRE-FLIGHT AND IN-FLIGHT DUTIES.**

Aerospace Activity 2

Name_____

AEROSPACE CAREER

FLIGHT ENGINEER

- **MONITORS THE OPERATION OF MECHANICAL AND ELECTRICAL DEVICES ABOARD AN AIRPLANE.**

Name_____

AEROSPACE CAREER

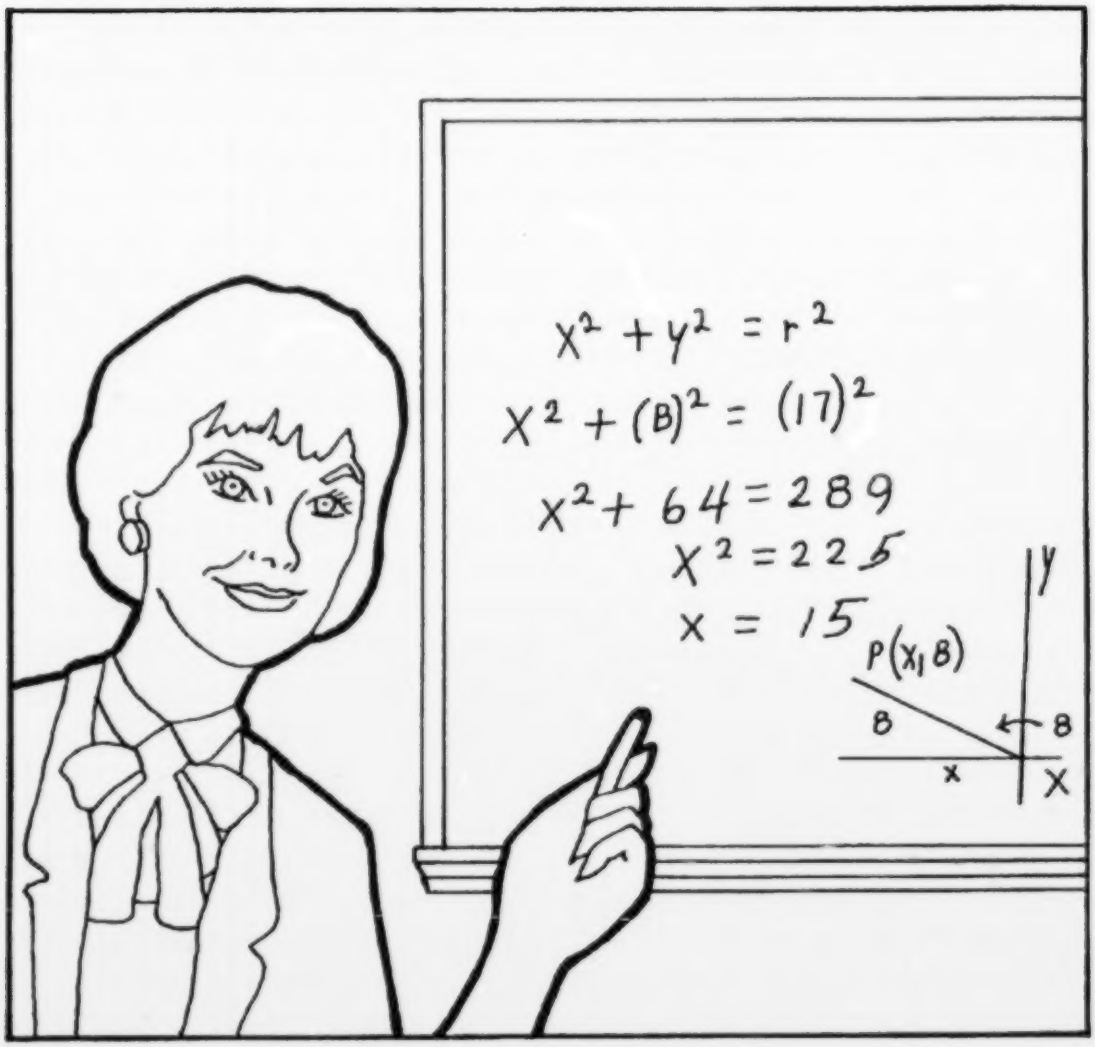
GEOLOGIST

- **STUDIES THE ORIGIN, HISTORY, AND COMPOSITION OF THE EARTH.**
- **WORKS WITH PHOTOGRAPHS TAKEN FROM AIRCRAFT, SPACECRAFT, AND SATELLITES.**
- **USES COMPUTERS TO RECORD AND ANALYZE DATA.**

Name_____

AEROSPACE CAREER

MATHEMATICIAN



- **SOLVES PRACTICAL PROBLEMS IN ENGINEERING AND THE NATURAL AND SOCIAL SCIENCES.**
- **ANALYZES THE MATHEMATICAL ASPECTS OF LAUNCHING EARTH SATELLITES.**
- **STUDIES THE EFFECTS OF NEW DRUGS ON DISEASES.**

Name_____

AEROSPACE CAREER

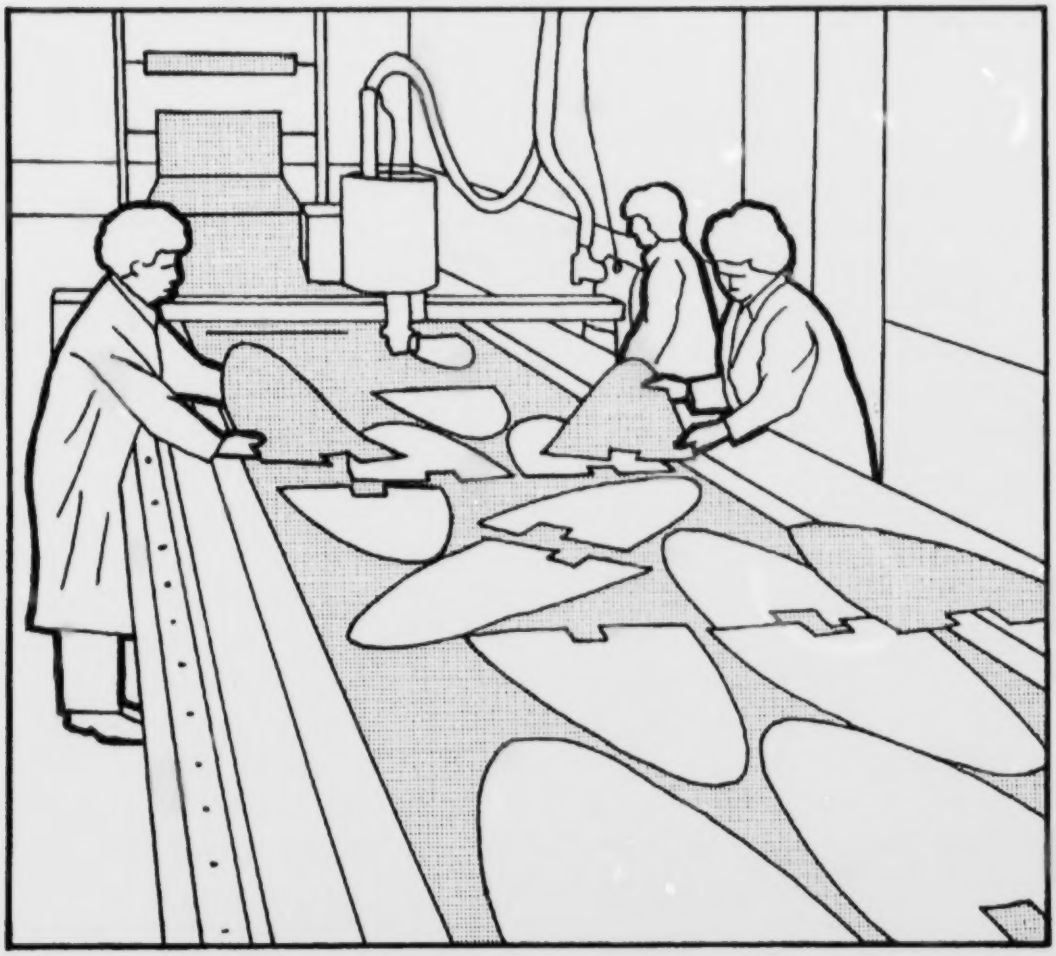
METEOROLOGIST

- **STUDIES WEATHER CONDITIONS AND FORECASTS CHANGES IN WEATHER.**
- **GIVES WEATHER REPORTS.**

Name _____

AEROSPACE CAREER

PATTERNMAKER AND MOLDER

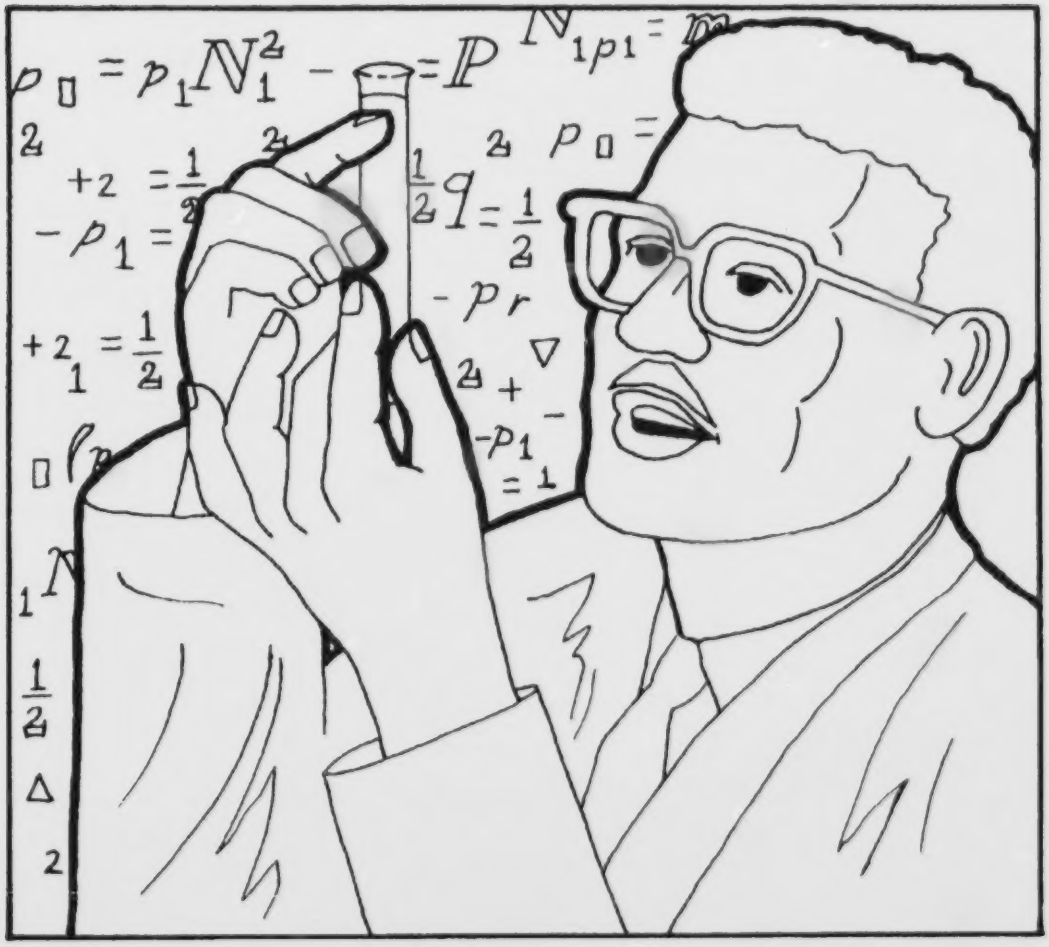


- **PREPARES THE MODELS AND MOLDS USED TO SHAPE METALS FOR SPACECRAFT.**

Name_____

AEROSPACE CAREER

PHYSICIST



- **INVESTIGATES THE FUNDAMENTAL LAWS OF NATURE.**
- **PERFORMS EXPERIMENTS AND ANALYZES THE RESULTS.**

Name_____

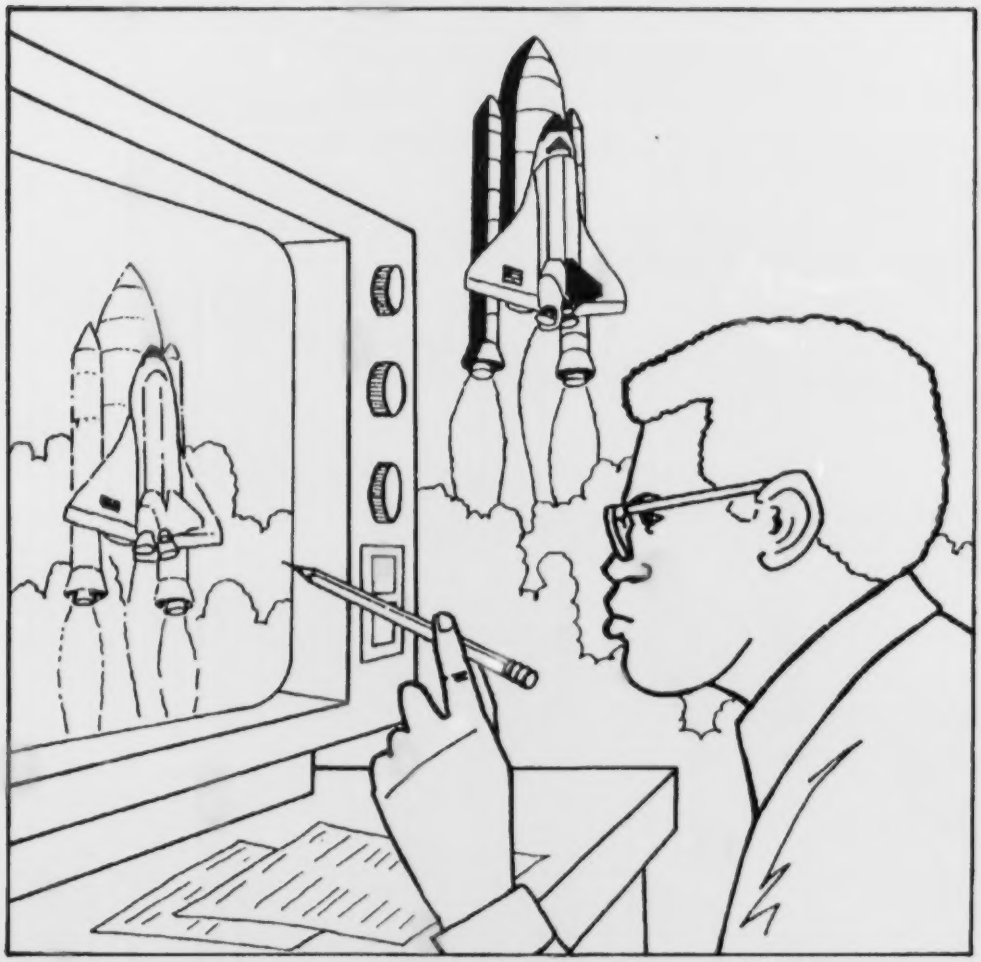
AEROSPACE CAREER

PILOT

- **OPERATES AN AIRCRAFT.**
- **DIRECTS OPERATION OF THE FLIGHT DEPARTMENT.**
- **CONDUCTS INDOCTRINATION TRAINING FOR NEW PILOTS AND REFRESHER TRAINING FOR EXPERIENCED PILOTS.**

Name_____

AEROSPACE CAREER
SCIENCE WRITER



- **ORGANIZES, INTERPRETS, WRITES, AND EDITS SCIENTIFIC AND TECHNICAL MATERIAL.**
- **COORDINATES WRITING PROJECTS AND ARRANGES FOR ILLUSTRATIONS AND PHOTOGRAPHS.**

Name_____

AEROSPACE CAREER

TEST AND RESEARCH ENGINEER

- **IMPROVES THE SPEED, RANGE, POWER, RELIABILITY, AND SAFETY OF OLD AND NEW AIRCRAFT AND SPACECRAFT.**
- **CONDUCTS STUDIES TO DETERMINE HOW WELL THE CRAFT OR EQUIPMENT WILL OPERATE.**

Aerospace Activity 3

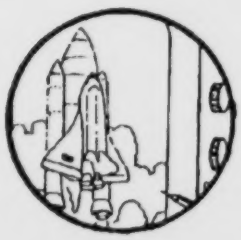
Name_____

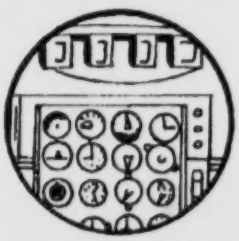
MATCHING ILLUSTRATIONS: Workers to Office Symbols

Study the aerospace workers.
Study the aerospace office symbols.
Draw a line to the symbol that matches the workers.

AEROSPACE WORKERS

OFFICE SYMBOLS





Aerospace Activity 3

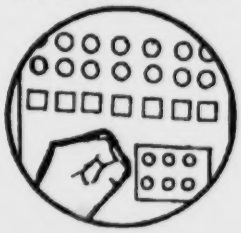
Name_____

MATCHING ILLUSTRATIONS: Workers to Office Symbols

Study the aerospace workers.
Study the aerospace office symbols.
Draw a line to the symbol that matches the workers.

AEROSPACE WORKERS

OFFICE SYMBOLS



Aerospace Activity 4

Name_____

MATCHING: Occupational Titles to Aerospace Workers

Read the occupational titles below.
Study the aerospace workers.
Draw a line to the worker that matches the titles.

OCCUPATIONAL TITLES	AEROSPACE WORKERS
Airline Reservation Agent	
Aeronautical Engineer	
Patternmaker	
Astronomer	
Physicist	

Aerospace Activity 4

Name_____

MATCHING: Occupational Titles to Aerospace Workers

Read the occupational titles below.
Study the aerospace workers.
Draw a line to the worker that matches the titles.

OCCUPATIONAL TITLES	AEROSPACE WORKERS
Astronaut	
Mathematician	
Baggage Porter	
Flight Attendant	
Air Traffic Controller	

Aerospace Activity 5

Name_____

AEROSPACE CAREER PUZZLE

#1

M T T P M A T H E M A T I C I A N A
E A A H A I R P O R T M A N A G E R
T O O Y A S A A R A S T R O N A U T
E L G S R S S B E S M O L D E R B C
O F L I G H T A T T E N D A N T I C
R O O C N V A N I R A P P L E N A K
O O A I O E K G R O T O L D A Y M E
L D D S O A E W W N E K A H V A E T
O W S T N C A R G O A G C M D L G M
G E O L O G I S T M S E N O O P A O
I E N G I N E E R E M J P I L O T N
S O A P P A T T E R N M A K E R O E
T X J N B A G G A G E P O R T E R Y

Locate the following aerospace careers:

1. AIRPORT MANAGER
2. ASTRONAUT
3. ASTRONOMER
4. BAGGAGE PORTER
5. ENGINEER
6. FLIGHT ATTENDANT
7. GEOLOGIST
8. MATHEMATICIAN
9. MECHANIC
10. METEOROLOGIST
11. MOLDER
12. PATTERNMAKER
13. PHYSICIST
14. PILOT
15. WRITER

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Aerospace Activity 5

Name_____

AEROSPACE CAREER PUZZLE
#2

T B A N A I C I N H C E T G N I R E E N I G N E E C A P S O R E A
S Y S T E M S A I R T R A F F I C C O N T R O L L E R A C I E F E
I Z T R E W O P M O V I N G R E T I R W E C N E I C S T I F S U R
C T R A G E D R M A P I O E C E M P U T E R W O O D T T N T E E O
I O O M E T E O R O L O G I S T E P R O D U C E M A A E A N A L S
S L N A O N H D J D I A K A I J X N A R G O A G E N T R H A R R P
Y I O N L O E U E H N P J S T K H A I C A R T S C A I N C D C E A
H P M A O I G C Z A K X F T R O Q B J G O I T U H L S M E N H T C
P O E G G T N T M O L D E R L T R Z F U N E S T A Y T A M E E R E
X C R E I U A T S P E A K O L O T D E E P E J H N Z I K T T N O E
R R B R S L R N A T U R E N A L F L Y I N G T E I E C E F T G P N
E E A S T O E M A T H E M A T I C I A N E A B H C J I R A A I E G
H A Y D P S A M P L E S T U S P S E V L O S N M G K A E R T N G I
T D E R O S P A C E I N S T R U C T I O N O R K P I N N C H E A N
Q K I E L E C T R O N I C S E N G I N E E R K Y A L L D R G E G E
E A I R L I N E R E S E R V A T I O N A G E N T S E L F I I R G E
E V I T A T N E S E R P E R Y T I R U C E S E N I L R I A L S A R
G R A D E R E C I F F O Y T E F A S N O I T A I V A L A W F E B R

Locate the following aerospace careers:

1. AEROSPACE ENGINEER
2. AEROSPACE ENGINEERING TECHNICIAN
3. AIRCRAFT MECHANIC
4. AIR TRAFFIC CONTROLLER
5. AIRLINE RESERVATION AGENT
6. AIRLINE SECURITY REPRESENTATIVE
7. AIRPORT MANAGER
8. ASTRONAUT
9. ASTRONOMER
10. AVIATION SAFETY OFFICER
11. BAGGAGE PORTER
12. COPILOT
13. ELECTRONICS ENGINEER
14. FLIGHT ATTENDANT
15. FLIGHT ENGINEER
16. GEOLOGIST
17. MATHEMATICIAN
18. METEOROLOGIST
19. MOLDER
20. PATTERNMAKER
21. PHYSICIST
22. PILOT
23. RESEARCH ENGINEER
24. SCIENCE WRITER

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Aerospace Activity 6

Name _____

VOCABULARY PUZZLE
#1

N A T U R E A Z F L I G H T S
U P K E A I R L I N E Z W U Y
M O Z W B D J E S C A P E R S
E G E T J E N S R A D I O K T
R E L O P A Q R M O L L Y E E
I D D S L S C U P L V O D Y M
C E I P A E R O N A U T I C S
A S R A C X A C A U F U Q P H
L I O C O P N O V N D A A Z I
A G C E M E G N I C E N G C N
E N K C P R E C G H M O O N V
R S E R O I S E A I Z R A M E
O T T A S M T P T N G T O P N
S U I F I E A T I G W S L E T
P D V T T N L S O C F A I R O
A I A J I T L E N G I N E E R
C E R V O S H I P M E N T S Y
E S G I N V E S T I G A T E S

Locate the following words:

1. AERONAUTICS
2. AEROSPACE
3. AIRLINE
4. AIRPLANE
5. ASTRONAUT
6. COMPOSITION
7. CONCEPTS
8. COURSE
9. DESIGNS
10. ENGINEER
11. EXPERIMENTS
12. FLIGHTS
13. IDEAS
14. INVENTORY
15. INVESTIGATES
16. LAUNCHING
17. MOON
18. NATURE
19. NAVIGATION
20. NUMERICAL
21. PILOT
22. RADIO
23. RANGE
24. ROCKET
25. SHIPMENTS
26. SPACECRAFT
27. STUDIES
28. SYSTEMS

Aerospace Activity 6
Name_____

VOCABULARY PUZZLE

#2

R E G U L A T I O N S P W E A T H E R K Y
E N O N A B H D R A W I N G S W I M A S T
S G V L W O G O N G F A T S Y S T E M S E
E I E O S A I I S B L G R N J R T R E A F
R N R A E R L N X P N J O W A L O P V W A
V E N D C D F G R I A I D F U F Y I T S S
A L M N E H O I N N T C F S R T A N E E P
T I E T L E A I N U P I E E O T E L L M E
I A N F E D A R L S C R P T I M C I A A C
O I T A S R O O T T T Q O O P I S D C T I
N R O R T F S W N S O R N I H S M E I H F
S P E C I A L A D X P D U E I B I A T E I
O O A R A A L T E R S Q V M N T K S U M C
X R R I L P N E X P E R I M E N T A A A A
T T T A R E L I A B I L I T Y N Q A N T T
O E H E L E C T R I C A L O G S T K O I I
L L W I L L U S T R A T I O N A J S R C O
I O S A T E L L I T E S B O D I E S E A N
P A S S E N G E R S M E C H A N I C A L S

Locate the following words:

1. ABOARD
2. AERONAUTICAL
3. AIR
4. AIRCRAFT
5. AIRPLANE
6. AIRPORT
7. ALTERS
8. AVIATION
9. BODIES
10. CELESTIAL
11. CHARTS
12. DATA
13. DRAWINGS
14. EARTH
15. ELECTRICAL
16. ENGINE
17. EQUIPMENT
18. EXPERIMENT
19. FLIGHT
20. GOVERNMENT
21. ILLUSTRATION
22. INSTRUMENTS
23. LAWS
24. LOG
25. MATHEMATICAL
26. MECHANICAL
27. MISSILES
28. PASSENGERS
29. PERFORMS
30. PILOT
31. POWER PLANT
32. PROTOTYPES
33. REGULATIONS
34. RELIABILITY
35. RESERVATIONS
36. RESULT
37. SAFETY
38. SATELLITES
39. SOLUTION
40. SPACE
41. SPECIAL
42. SPECIFICATIONS
43. SYSTEMS
44. TRAFFIC
45. TRAINING
46. UNLOAD
47. VEHICLES
48. WEATHER

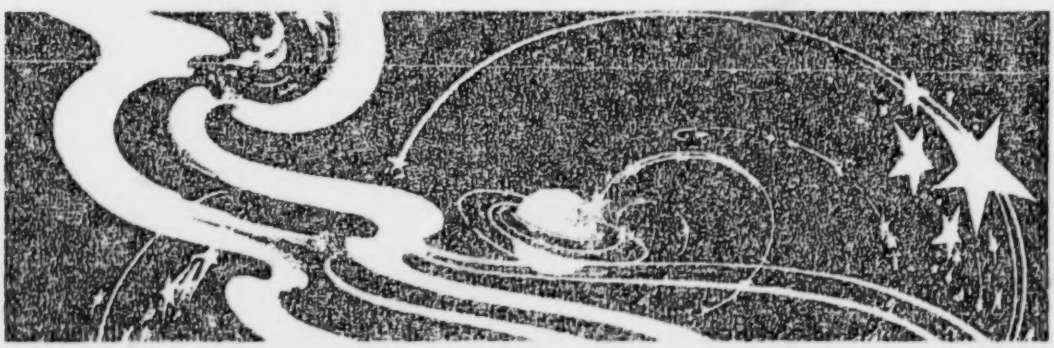
Aerospace Activity 7

Name_____

SPELLING

In each of the following items, only one word is spelled correctly. Select the correct spelling by writing the letter in the proper blank.

_____ 1.	(A) tachnician	(B) tachnecian	(C) technician	(D) technicean
_____ 2.	(A) engineer	(B) enginer	(C) ingineer	(D) ingeneer
_____ 3.	(A) mechanec	(B) mechanic	(C) mechenic	(D) machanic
_____ 4.	(A) aerospace	(B) airospace	(C) aerospase	(D) airospase
_____ 5.	(A) flight	(B) fleight	(C) flighte	(D) flyght
_____ 6.	(A) reservatial	(B) restervation	(C) restervetion	(D) reservation
_____ 7.	(A) peloit	(B) pelot	(C) pilote	(D) pilot
_____ 8.	(A) airplene	(B) airplane	(C) aerplane	(D) aerplene
_____ 9.	(A) astronut	(B) astronaut	(C) astronaute	(D) astroneut
_____ 10.	(A) astrenemer	(B) astronomer	(C) astronemer	(D) astrenomer
_____ 11.	(A) geeologist	(B) geeologest	(C) geologest	(D) geologist
_____ 12.	(A) methamatician	(B) mathametician	(C) mathematician	(D) mathamaticien
_____ 13.	(A) meteorologist	(B) meterologist	(C) meteorologest	(D) metrologist
_____ 14.	(A) patternmaker	(B) paternmaker	(C) pattermaker	(D) paternmeker
_____ 15.	(A) pysicist	(B) physecest	(C) physicist	(D) phisicist
_____ 16.	(A) aveiation	(B) aviation	(C) aveation	(D) aveation
_____ 17.	(A) aironautical	(B) aerenautical	(C) aeronautical	(D) aeronotical
_____ 18.	(A) pasenger	(B) passenjer	(C) pasenjer	(D) passenger
_____ 19.	(A) electronics	(B) electroniks	(C) ellectronics	(D) electrenics
_____ 20.	(A) selestial	(B) celesial	(C) selesial	(D) celestial



Aerospace Activity 8

Name _____

MATCHING: CAREERS TO JOB RESPONSIBILITIES

Match the aerospace careers in Column B to their responsibilities in Column A in the space provided. Each career can be used only once.

A—RESPONSIBILITIES	B—CAREERS
_____ 1. Prepares aircraft and spacecraft drawings, diagrams, and specifications.	A. Aerospace Engineering Technician
_____ 2. Checks the operation of an airplane's mechanical and electrical devices.	B. Airline Security Representative
_____ 3. Prepares models for shaping spacecraft metals.	C. Airline Reservation Agent
_____ 4. Studies the universe and its celestial bodies.	D. Test & Research Engineer
_____ 5. Directs airplanes in and around the airport.	E. Aeronautical Engineer
_____ 6. Improves a spacecraft's speed and reliability.	F. Air Traffic Controller
_____ 7. Designs and tests scientific equipment.	G. Electronics Engineer
_____ 8. Designs aircraft and space vehicles.	H. Aircraft Mechanic
_____ 9. Studies the Earth's composition.	I. Flight Engineer
_____ 10. Repairs and maintains aircraft.	J. Airport Manager
_____ 11. Makes passenger reservations.	K. Meteorologist
_____ 12. Screens airline passengers.	L. Science Writer
_____ 13. Writes scientific material.	M. Patternmaker
_____ 14. Studies weather conditions.	N. Astronomer
_____ 15. Directs an airport's operation.	O. Geologist
_____ 16. Operates a space shuttle.	P. Astronaut
_____ 17. Flies an airplane.	Q. Pilot

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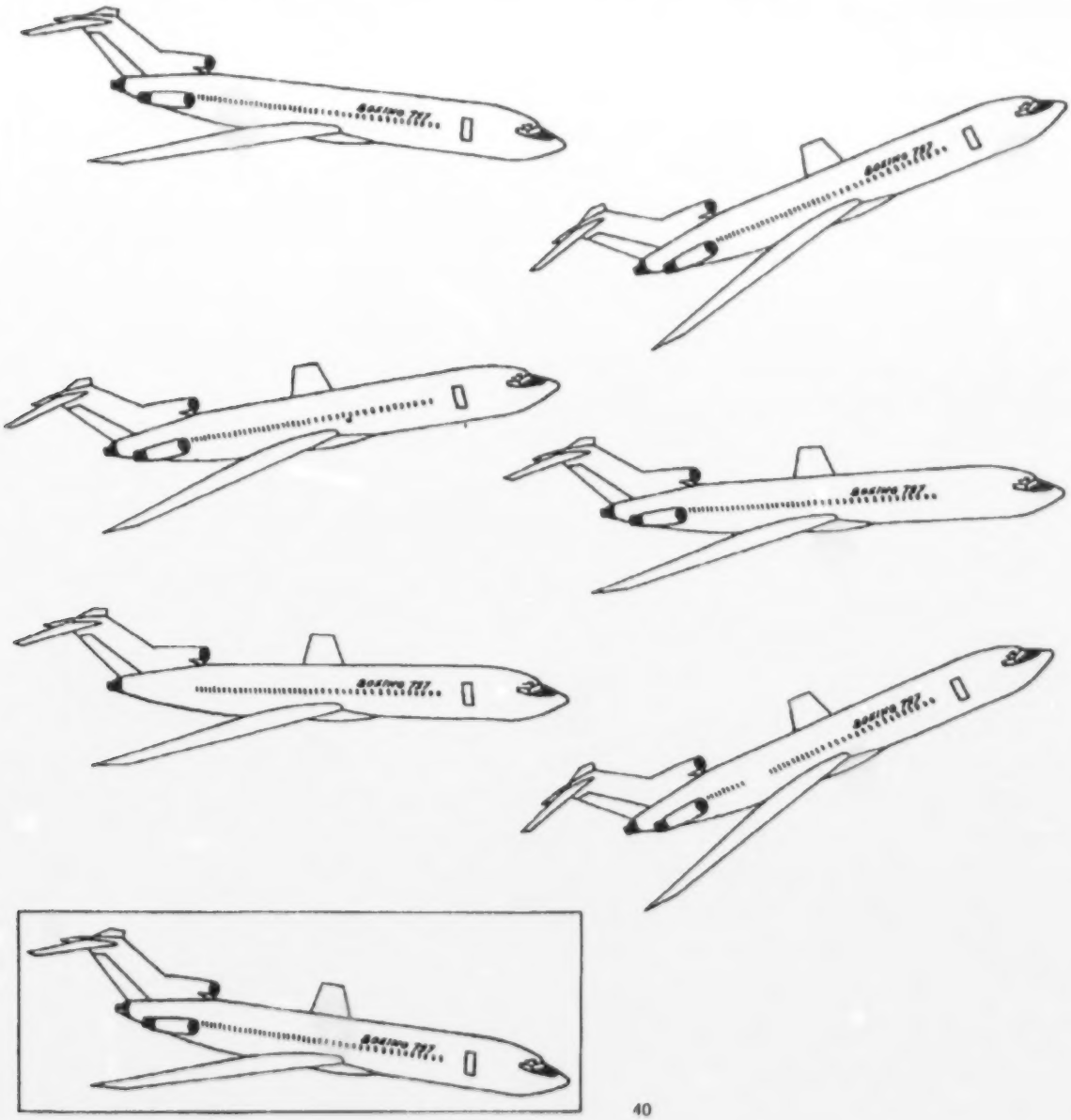
Aerospace Activity 9

Name_____

VISUAL DISCRIMINATION: Airplane

Circle the airplane that matches the airplane in the box.
Color the other airplanes.

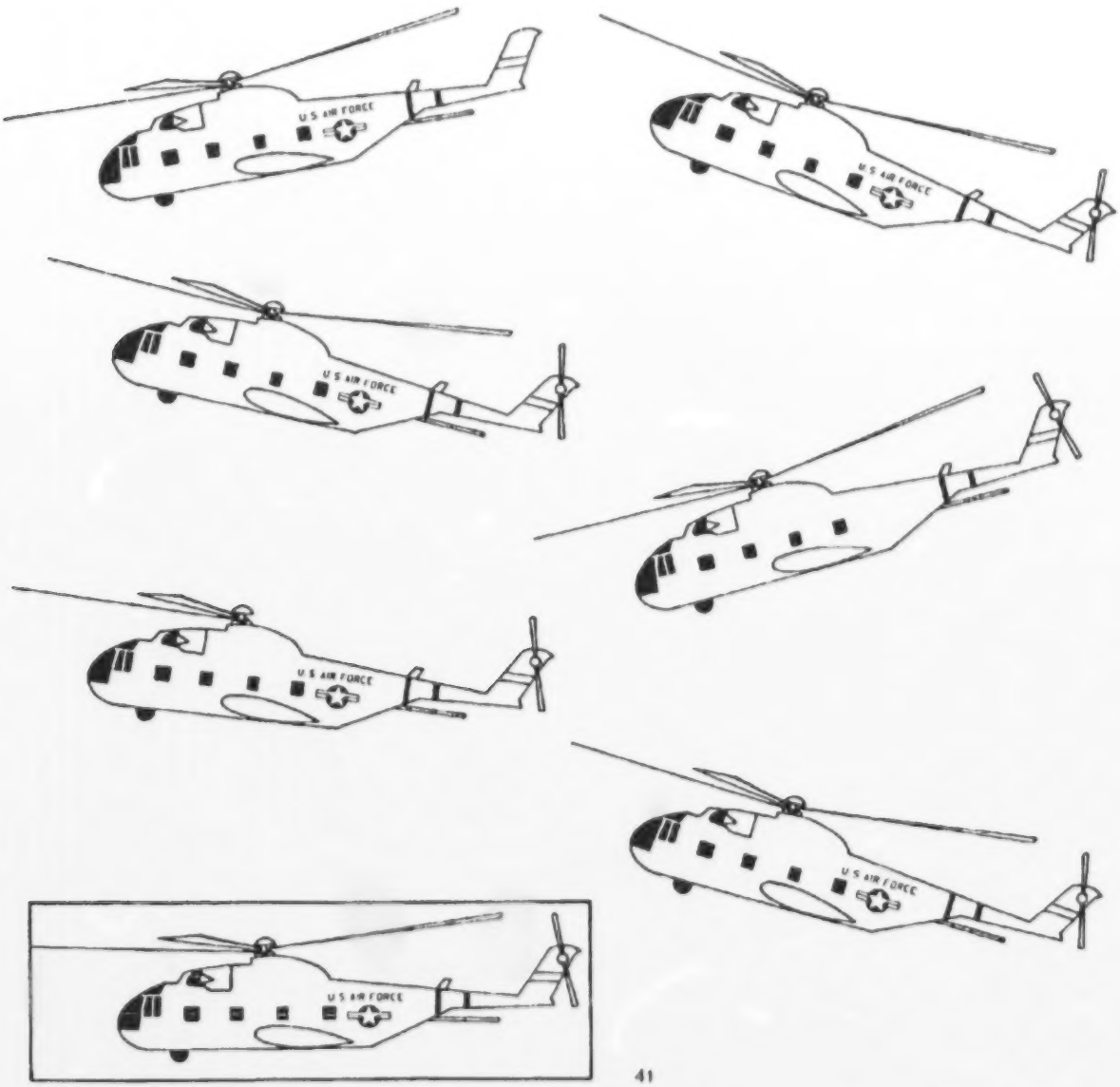


Aerospace Activity 9

Name_____

VISUAL DISCRIMINATION: Helicopter

Circle the helicopter that matches the helicopter in the box.
Color the other helicopters.



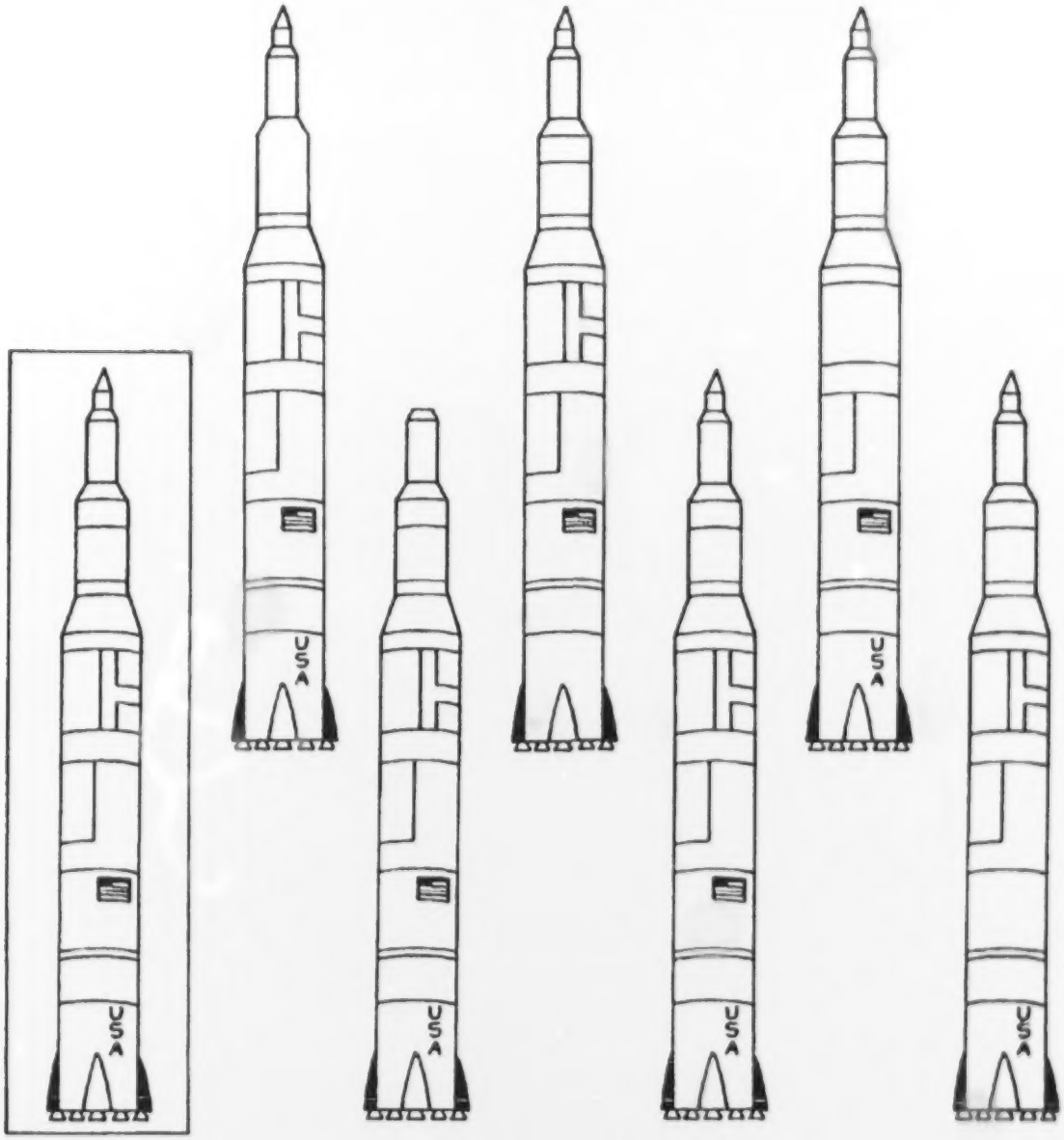
41

Aerospace Activity 9

Name_____

VISUAL DISCRIMINATION: Rocket

Circle the rocket that matches the rocket in the box.
Color the other rockets.

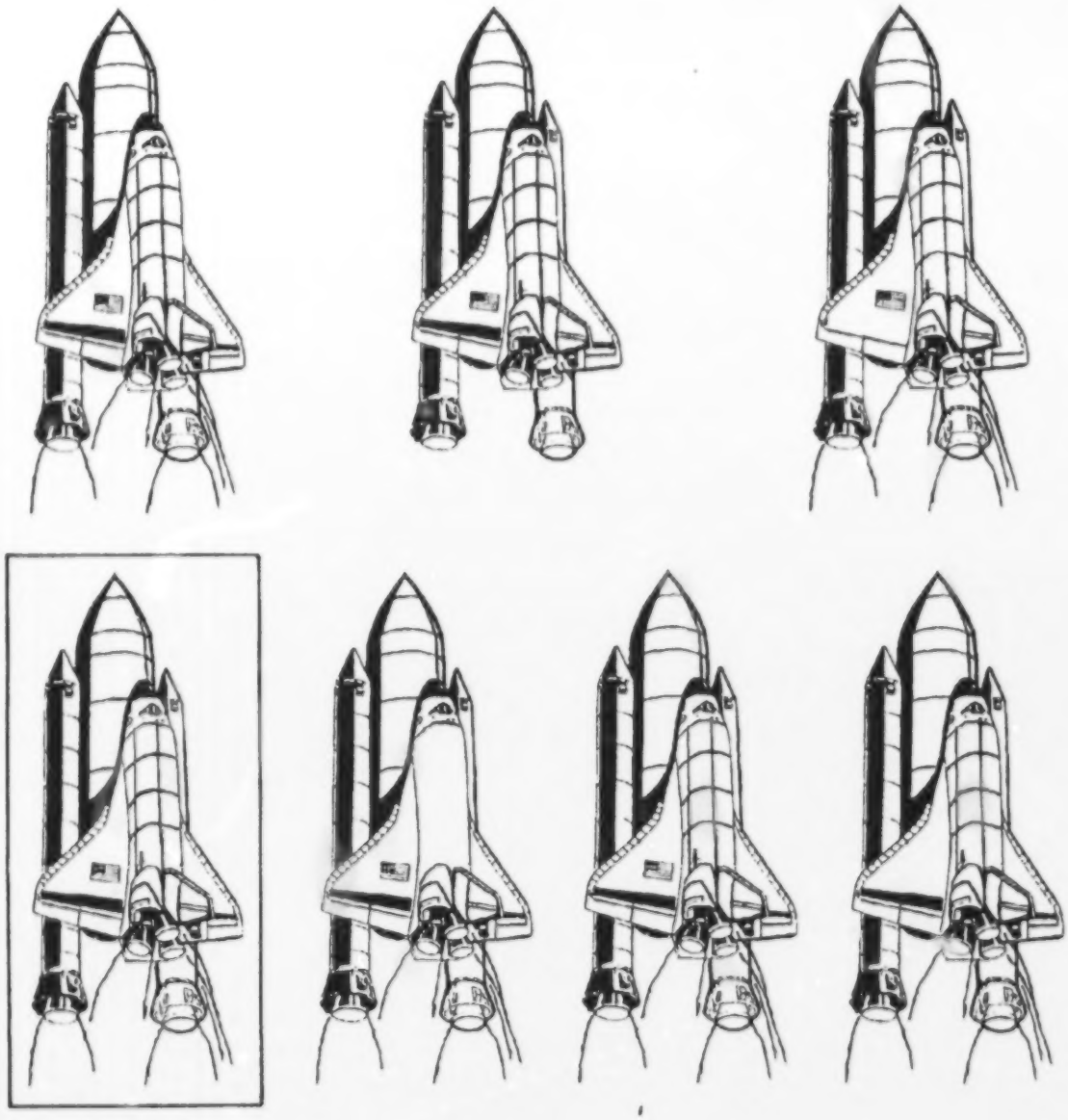


Aerospace Activity 9

Name_____

VISUAL DISCRIMINATION: Space Shuttle

Circle the space shuttle that matches the space shuttle in the box.
Color the other space shuttles.



Aerospace Activity 10

CONCENTRATION

Cut out the cards.
Mix up the cards.
Place them face down in several rows.
Match the letters.

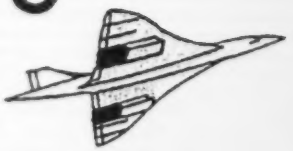
A

Astronaut

B

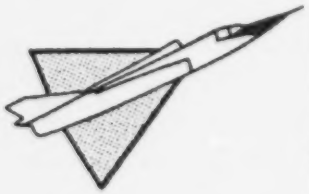
Boeing 747

C



Concorde

D



Delta Wing

E

Empennage

F

F-16

G

Goodyear Blimp

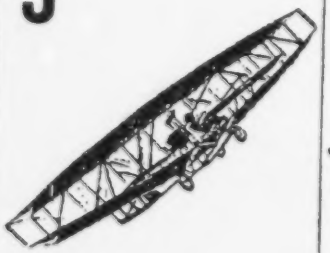
H

Hughes 500D

I

Intelsat

J



June Bug

K

KC-10A

L

Longhorn

M

ME-262

Aerospace Activity 10

CONCENTRATION

Cut out the cards.
Mix up the cards.
Place them face down in several rows.
Match the letters.

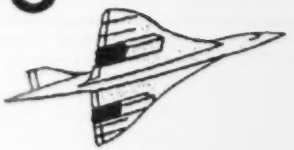
A

Astronaut

B

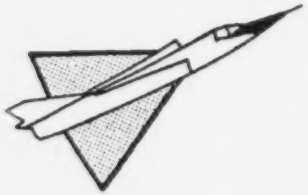
Boeing 747

C



Concorde

D



Delta Wing

E

Empennage

F

F-16

G

Goodyear Blimp

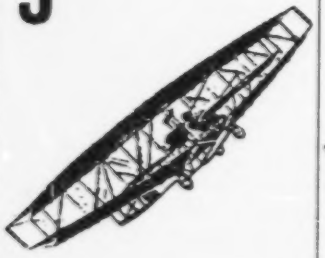
H

Hughes 500D

I

Intelsat

J



June Bug

K

KC-10A

L

Longhorn

M

ME-262

Aerospace Activity 10

CONCENTRATION

Cut out the cards.
Mix up the cards.
Place them face down in several rows.
Match the letters.

N

NC-4

O

OV-10A

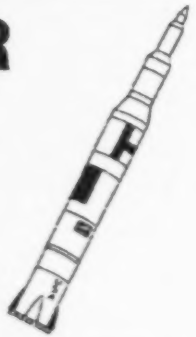
P

Pilot

Q

QSRA

R

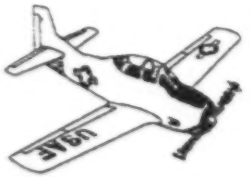


Rocket

S

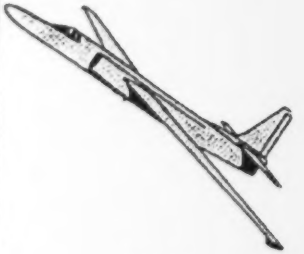
Space Shuttle

T



T-28

U



U-2

V

VS-300

W

Wright Flyer

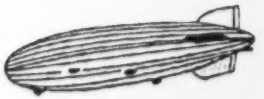
X

X-1

Y

Yankee Clipper

Z



Zeppelin

Aerospace Activity 10

CONCENTRATION

Cut out the cards.
Mix up the cards.
Place them face down in several rows.
Match the letters.

N

NC-4

O

OV-10A

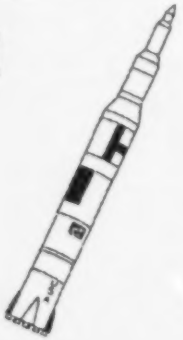
P

Pilot

Q

QSRA

R



Rocket

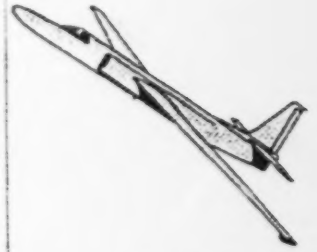
S

Space Shuttle

T

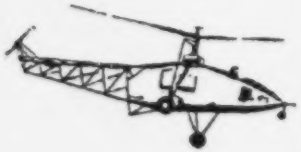
T-28

U



U-2

V



VS-300

W

Wright Flyer

X

X-1

Y

Yankee Clipper

Z

Zeppelin

TEACHER RESOURCE SECTION

(This section provides the answers to the exercises listed in the Student Aerospace Activity Section.)

AEROSPACE CAREERS

1. AERONAUTICAL ENGINEERS design, develop, and test aircraft, surface effect vehicles, and missiles, applying engineering principles and techniques. They test models, prototypes, subassemblies, or production vehicles to study and evaluate operational characteristics and effects of stress imposed during actual or simulated flight conditions.
2. AEROSPACE ENGINEERING TECHNICIANS help engineers and other scientists convert space age theories into practical realities. They check or prepare drawings, diagrams, specifications, reports, or manuals and set up and perform tests on materials, parts, and systems to measure performance and reliability.
3. AEROSPACE ENGINEERS specialize in the design, construction, or testing of aircraft. They design all types of aircraft and test models to determine their maneuverability, structural stability, and other characteristics under flight conditions. They supervise the assembly of the plane and the installation of the engines, instruments, and other equipment. They engage in research involving the design and development of airplane, missile and space structure, engines, parts, and other equipment.
4. AIR TRAFFIC CONTROLLERS coordinate all flight activities to prevent accidents. Some regulate airport traffic while others regulate planes in flight between airports. They monitor all planes in and around the airport. Planes that are not visible from the control tower are monitored on a radar screen.
5. AIRCRAFT MECHANICS examine, service, repair, and overhaul aircraft and aircraft engines. They also adjust and repair the electrical wiring system, aircraft accessories and instruments, and the pneumatic and hydraulic systems, as well as perform routine checkups, cleaning, and greasing.
6. AIRLINE RESERVATION AGENTS work in the central offices of airline companies. They make and confirm reservations for passengers on scheduled airline flights, and they use timetables, airline manuals, reference guides, and tariff books to plan the reservations and routing. They may maintain an inventory of passenger space available on flights.
7. AIRLINE SECURITY REPRESENTATIVES screen passengers, visitors, and the airline crew for weapons, explosives, or other forbidden articles to prevent articles from being carried into restricted area of air terminal.
8. AIRPORT MANAGERS are responsible for the efficient day-to day operation of the airport, including provision for aircraft maintenance and fuel condition and safety of runways and other facilities, as well as the budget and personnel. They negotiate leases, such as airline and terminal concessionaires, with airport tenants, enforce airport and government regulations, do recordkeeping, and perform public relations.
9. ASTRONAUTS extend our knowledge of space and our physiological adaptation to that environment. They conduct experiments and gather information while in actual spaceflight and on the moon. They also conduct experiments with the spacecraft to develop new concepts in design, engineering, and the navigation of a vehicle outside the Earth's atmosphere.

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10. ASTRONOMERS study the universe and its celestial bodies by collecting and analyzing data. They also study the size and shape of the Earth and the properties of its upper atmosphere through observation and through information obtained by means of spacecraft and Earth satellites.

11. AVIATION SAFETY OFFICERS inspect aircraft and maintenance facilities to assure conformance with Federal safety and qualification standards. They examine aircraft maintenance records and flight logs to determine if checks and overhauls were performed at prescribed intervals.

12. BAGGAGE PORTERS carry baggage for airline passengers by hand or hand truck to waiting or baggage room. They perform related services, such as calling taxicabs and directing persons to ticket windows and restrooms.

13. ELECTRONICS ENGINEERS design and test new products, such as industrial machinery controls, computers, and scientific equipment. They design, operate, and maintain communication and electrical power systems. They also determine performance standards for new products and write maintenance schedules to ensure that standards will be met.

14. FLIGHT ATTENDANTS render a variety of personal services to airline passengers in order to make their traveling as comfortable and enjoyable as possible. They perform a variety of pre-flight and in-flight duties.

15. FLIGHT ENGINEERS monitor the operation of various mechanical and electrical devices aboard an airplane. They are concerned with the condition and the performance of the plane before, during, and after the flight.

16. GEOLOGISTS study the physical aspects of the Earth, including its origin, history, composition, and structure. They obtain physical data by drilling, collecting, and examing rocks and other samples. They work with photographs taken from aircraft, spacecraft, and satellites. They use computers to record and analyze data.

17. MATHEMATICIANS solve or direct the solution of problems in higher mathematics, including algebra, geometry, number theory, logic, and topology. They are concerned with the development of relationships among mathematical forms and the underlying principles that can be applied to a variety of problems, including electronic data processing and military planning. They develop the actual techniques and approaches to problem solving in the physical, biological, and social sciences. They may act as consultants to industry to assist research personnel in setting up the application of a problem-solving method.

18. METEOROLOGISTS study weather conditions, forecast changes in weather, and analyze weather maps covering large geographical areas and related charts including upper-air maps and soundings. They predict the movement of fronts, precipitation, and pressure areas to forecast such data as temperature, winds, precipitation, cloud cover, and airways' flying conditions. They conduct research on such subjects as atmospheric electricity, clouds, precipitation, hurricanes, and the use of data collected from weather satellites.

19. PATTERNMAKERS AND MOLDERS work in foundries preparing the models and molds used to shape metals into intricate castings that are essential for spacecraft and other products. They make wood or metal patterns in the shape of the castings designed by engineers.

20. PHYSICISTS conduct research into phases of physical phenomena. They perform experiments and analyze the products or results of their experiments. They may teach, have charge of scientific projects, or act as consultants in a laboratory. They investigate and attempt to understand the fundamental laws of nature and how these laws may be formulated and put to use.

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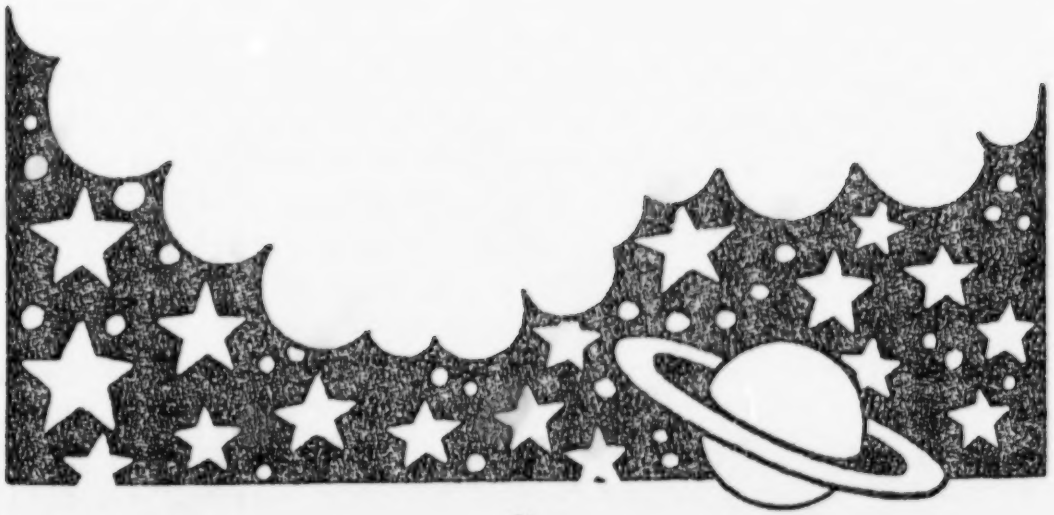
21. PILOTS AND COPILOTS operate an aircraft for the transportation of passengers, freight, and mail, or for other commercial purposes. The types of pilots involved in general aviation include air taxi and charter pilots, commercial pilots (patrol, ferry, aerial survey, photography, advertising, sightseeing, and ambulance), corporate or executive pilots, flight instructors, test pilots, and agricultural pilots.

22. SCIENCE WRITERS (sometimes called engineering writers) organize, interpret, write, and edit scientific and technical material. They must write in a clear and concise manner for consumer publications, or in highly specialized language for experts. They are responsible for providing information to managers for use in decision making and to technicians for operation and maintenance of equipment. The science writers coordinate writing projects and arrange for illustrations and photographs to be included in publications.

23. TEST AND RESEARCH ENGINEERS improve the speed, range, power, reliability, and safety of both old and new aircraft and spacecraft. Research engineers (sometimes called research scientists) work in the development of original designs and models, while test engineers are more concerned with later stages of development. The two types of workers coordinate their efforts in the modifications made during the course of testing and final production of the craft.



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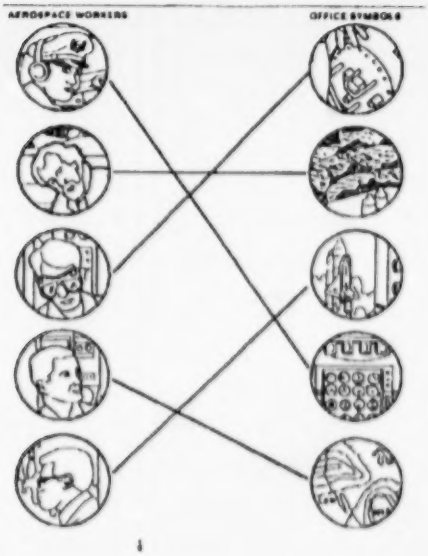
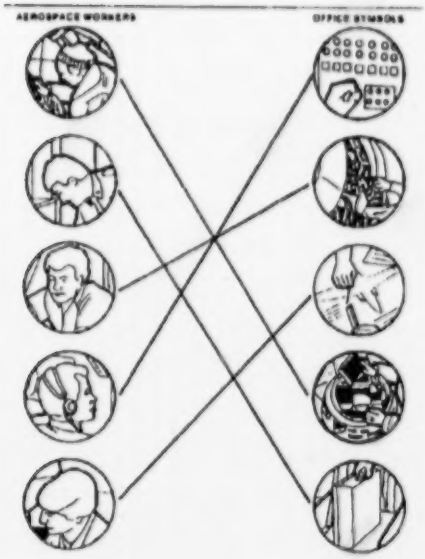
Teacher Resource Sheet 2

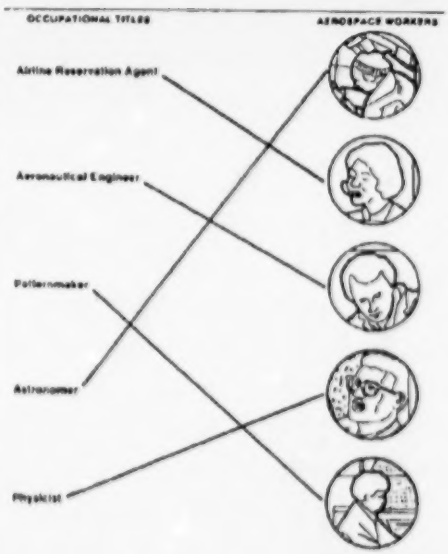
(To be used with Student Aerospace Activity Sheet 3)

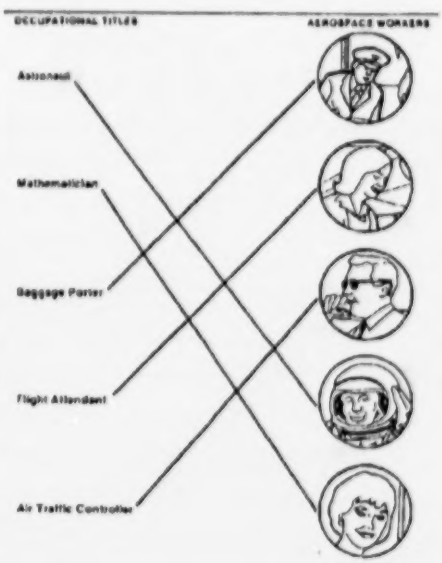




Teacher Resource Sheet 3

(To be used with Student Aerospace Activity Sheet 4)





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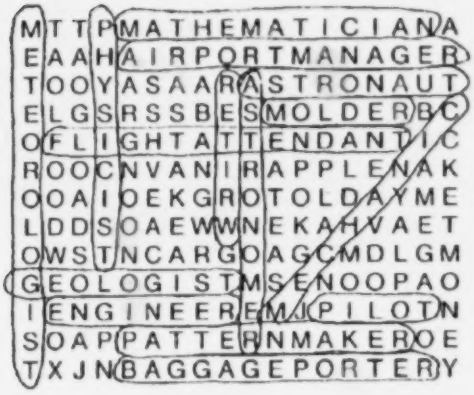
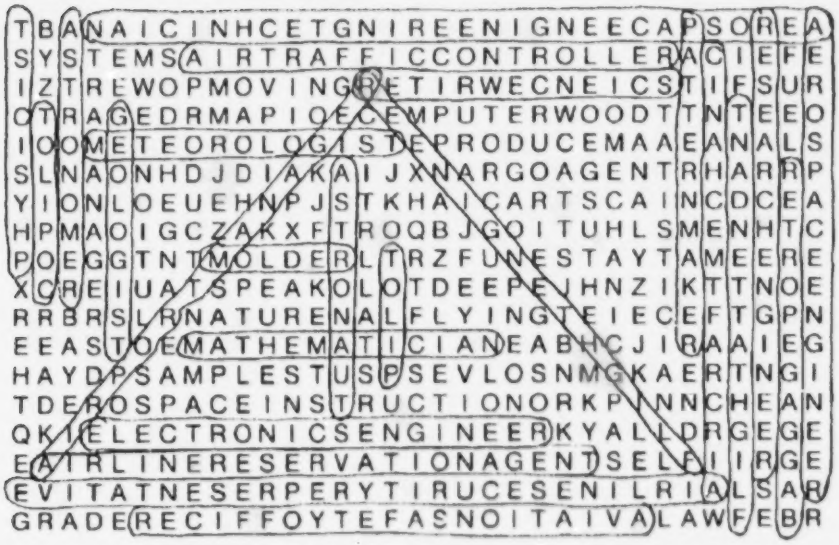
AEROSPACE CAREER PUZZLE

#1



AEROSPACE CAREER PUZZLE

#2



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Teacher Resource Sheet 5

(To be used with Student
Aerospace Activity Sheet 6)

VOCABULARY PUZZLE #1

N A T U R E A Z F L I G H T S
U P K E A I R L I N E Z W U Y
M O Z W B D J E S C A P E R S
E G E T J E N S R A D I O K T
R E L O P A Q R M O L L Y E E
I D D S L S C U P L V Q D Y M
C E I P A E R O N A U T I C S
A S R A C X A C A U F U Q P H
L I O C O P N O V N D A A Z I
A G C E M E G N I C E N G C N
E N K C P R E C G H M O O N V
R S E R O I S E A I Z R A M E
O T T A S M T P T N G T O P N
S U I F I E A T I G W S L E T
P D V T T N L S O C F A I R O
A I A J I T L E N G I N E E R
C E R V O S H I P M E N T S Y
E S G I N V E S T I G A T E S

VOCABULARY PUZZLE #2

R E G U L A T I O N S P W E A T H E R K Y
E N O N A B H D R A W I N G S W I M A S T
S G V L W O G O N G F A T S Y S T E M S E
E I E O S A I I S B L G R N J R T H E A F
R N R A E R L N X P N J O W A L O P V W A
V E N D C D F G R T A I D F U F Y T S S
A L M N E H O N N T C E S R T A N E E P
T I E T L E A I N U P T E E O T E L L M E
I A N F E D A R L S C R P T I M C I A A C
O I T A S R O O T T T O O O P I S D C T I
N R O R T F S W N S O R U I H S M E I H F
S P E C I A L A D X P O I N E I B I A T E I
O O A R A A L T E R S O V M N T K S U M C
X R R I L P N E X P E R I M E N T A A A A
T T T A R E L I A B I L I T Y N O A N T T
O E H E L E C T R I C A L O G S T K O I I
L L W I L L U S T R A T I O N A J S R C O
I O S A T E L L I T E S B O D I E S E A N
P A S S E N G E R S M E C H A N I C A L S

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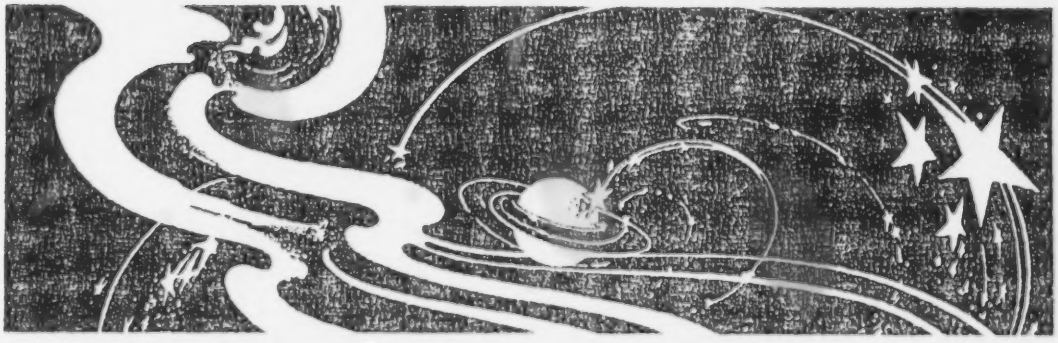
Teacher Resource Sheet 6

(To be used with Student Aerospace Activity Sheet 7)

C	1.	(A) tachnician	(B) tachnecian	(C) technician	(D) technicean
A	2.	(A) engineer	(B) enginer	(C) ingineer	(D) ingeneer
B	3.	(A) mechanec	(B) mechanic	(C) mechenic	(D) machanic
A	4.	(A) aerospace	(B) airospace	(C) aerospase	(D) airospase
A	5.	(A) flight	(B) fleight	(C) flighte	(D) flyght
D	6.	(A) reservatial	(B) restervation	(C) restervetion	(D) reservation
D	7.	(A) peloit	(B) pelot	(C) pilote	(D) pilot
B	8.	(A) airplene	(B) airplane	(C) aerplane	(D) aerplene
B	9.	(A) astronut	(B) astronaut	(C) astronaute	(D) astroneut
B	10.	(A) astrenemer	(B) astronomer	(C) astronemer	(D) astrenomer
D	11.	(A) geeologist	(B) geeologest	(C) geologest	(D) geologist
C	12.	(A) methamatician	(B) mathametician	(C) mathematician	(D) mathamaticien
A	13.	(A) meteorologist	(B) meterologist	(C) meteorologest	(D) metrologist
A	14.	(A) patternmaker	(B) paternmaker	(C) pattermaker	(D) paternmeker
C	15.	(A) pysicist	(B) physecest	(C) physicist	(D) phisicist
B	16.	(A) aveiation	(B) aviation	(C) aveation	(D) aveation
C	17.	(A) aironautical	(B) aerenautical	(C) aeronautical	(D) aeronotical
D	18.	(A) pasenger	(B) passenjer	(C) pasenjer	(D) passenger
A	19.	(A) electronics	(B) electroniks	(C) ellectronics	(D) electrenics
D	20.	(A) selestial	(B) celesial	(C) selesial	(D) celestial



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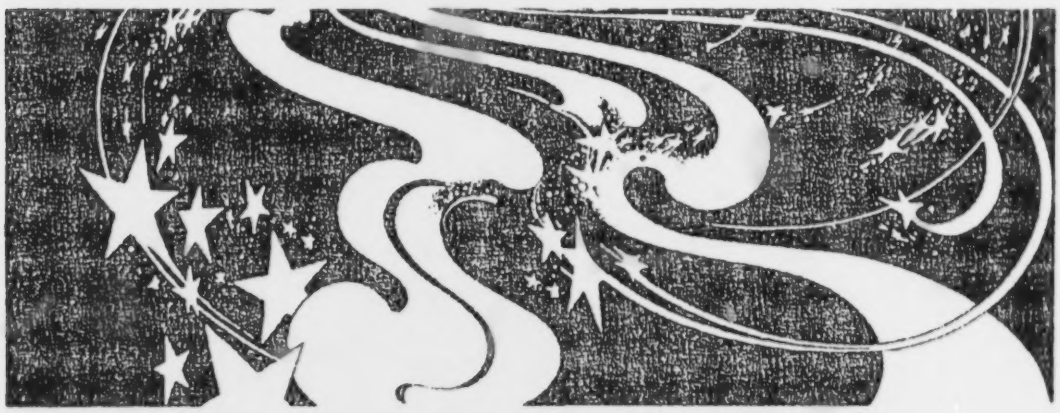
Teacher Resource Sheet 7

(To be used with Student
Aerospace Activity Sheet 8)

	A—RESPONSIBILITIES	B—CAREERS
A	1. Prepares aircraft and spacecraft drawings, diagrams, and specifications.	A. Aerospace Engineering Technician
I	2. Checks the operation of an airplane's mechanical and electrical devices.	B. Airline Security Representative
M	3. Prepares models for shaping spacecraft metals.	C. Airline Reservation Agent
N	4. Studies the universe and its celestial bodies.	D. Test & Research Engineer
F	5. Directs airplanes in and around the airport.	E. Aeronautical Engineer
D	6. Improves a spacecraft's speed and reliability.	F. Air Traffic Controller
G	7. Designs and tests scientific equipment.	G. Electronics Engineer
E	8. Designs aircraft and space vehicles.	H. Aircraft Mechanic
O	9. Studies the Earth's composition.	I. Flight Engineer
H	10. Repairs and maintains aircraft.	J. Airport Manager
C	11. Makes passenger reservations.	K. Meteorologist
B	12. Screens airline passengers.	L. Science Writer
L	13. Writes scientific material.	M. Patternmaker
K	14. Studies weather conditions.	N. Astronomer
J	15. Directs an airport's operation.	O. Geologist
P	16. Operates a space shuttle.	P. Astronaut
Q	17. Flies an airplane.	Q. Pilot



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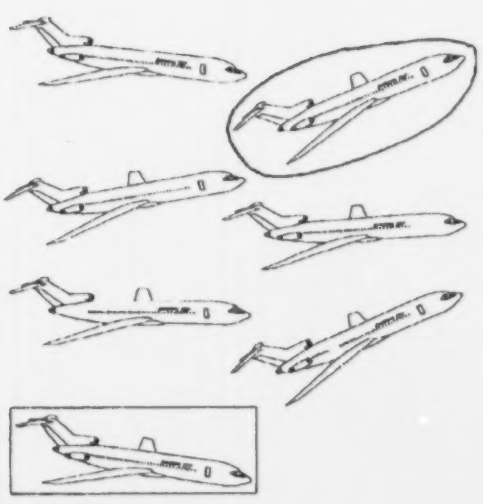
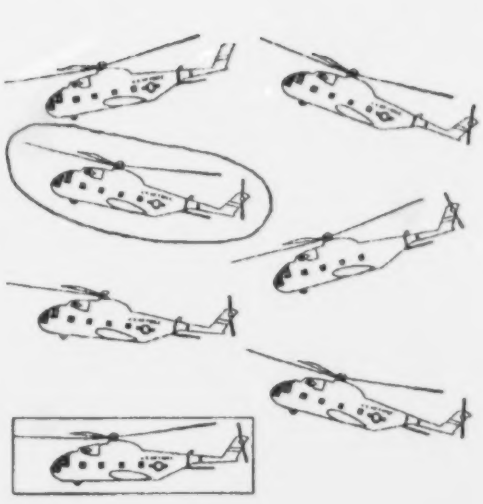
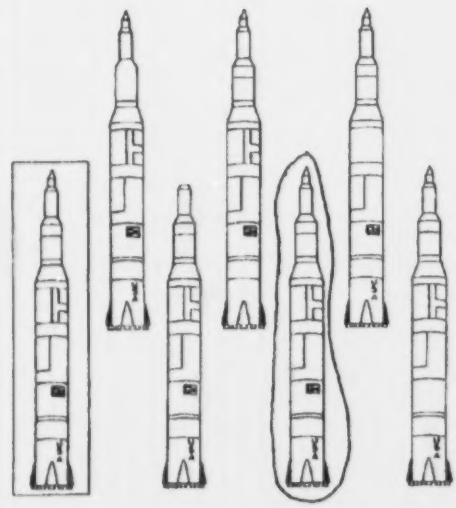
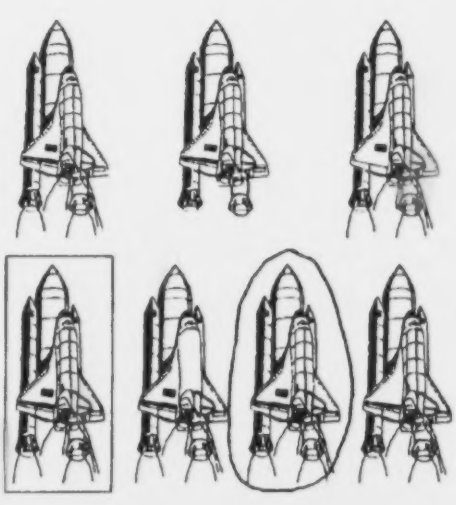
Teacher Resource Sheet 8

(To be used with student
Aerospace Activity Sheet 9)









AEROSPACE CAREERS FOR THE ELEMENTARY LEVEL

AEROSPACE CAREERS	SCHOOL SUBJECTS										
	ART	ENGLISH	HANDWRITING	HEALTH	MATHEMATICS	MUSIC	PHONICS	READING	SCIENCE	SOCIAL STUDIES	SPELLING
AERONAUTICAL ENGINEER	•	•			•			•	•	•	
AEROSPACE ENGINEER		•			•			•	•	•	•
AEROSPACE ENGINEERING TECHNICIAN	•	•			•			•	•	•	•
AIR TRAFFIC CONTROLLER		•					•	•	•	•	
AIRCRAFT MECHANIC		•			•			•	•	•	
AIRLINE RESERVATION AGENT		•	•				•	•		•	•
AIRLINE SECURITY REPRESENTATIVE		•		•				•	•	•	
AIRPORT MANAGER		•			•		•	•	•	•	•
ASTRONAUT		•		•	•			•	•	•	
ASTRONOMER	•	•			•			•	•	•	
AVIATION SAFETY OFFICER		•		•	•			•	•	•	•
BAGGAGE PORTER		•		•				•		•	
ELECTRONICS ENGINEER		•			•			•	•	•	
FLIGHT ATTENDANT		•		•			•	•		•	
FLIGHT ENGINEER		•			•			•	•	•	
GEOLOGIST		•		•	•			•	•	•	•
MATHEMATICIAN		•			•			•	•	•	
METEOROLOGIST	•	•	•		•		•	•	•	•	•
PATTERNMAKER AND MOLDER	•	•			•			•			
PHYSICIST		•			•			•	•	•	•
PILOT		•		•	•			•	•	•	•
SCIENCE WRITER		•						•	•	•	•
TEST AND RESEARCH ENGINEER		•			•			•	•	•	•

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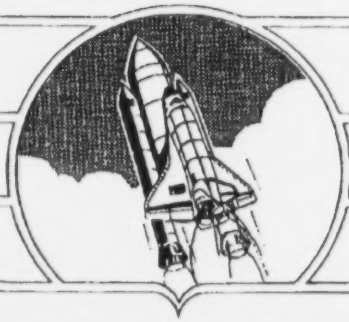

CIVIL AIR PATROL
AEROSPACE EDUCATION

☆

AEROSPACE CAREER AWARD

Presented to

_____

*This*_____ *day of*_____ *19*___

_____
Teacher

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